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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/709,202	04/21/2004	Hsien-Chin Chiang	WISP0048USA	3201
27765	7590	11/07/2005	EXAMINER	
NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116			BROUSSARD, COREY M	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/709,202	CHIANG ET AL.	
	Examiner	Art Unit	
	Corey M. Broussard	2835	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 7, 9, 10, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Marquis et al. (PN 6,113,485). With respect to claim 1, Marquis teaches a fan module (60) with an air inlet and an air outlet (a fan must inherently have an intake and outlet to create an airflow), capable of drawing air into the air inlet and exhausting air from the air outlet; a heat sink module (16) with an air inlet, an air outlet, and a heat conduction part (18); the heat conduction part being between the air inlet and the air outlet (see Fig. 13, clearly showing the air flowing into and out from the heatsink), the fan module stacked onto the heat sink module with the air inlet of the heat sink module connecting to the air outlet of the fan module, the heat conduction part stacked onto a circuit (12) of the computer system; the heat sink module allowing air to be drawn into the air inlet and through the heat conduction part and exhausted form the air outlet (see Fig. 13); and an air wall (10) between the air inlet of the fan module and the air outlet of

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the heat sink module for isolating airflow from the air outlet of the heat sink module to the air inlet of the fan module (see Fig. 13), so that heated air from the air outlet of the heat sink module is prevented from flowing into the air inlet of the fan module.

4. With respect to claim 3, Marquis teaches wherein the computer system and the cooling module are disposed within a case (30).

5. With respect to claim 7, Marquis teaches wherein the air wall (10) divides the case into a first room and a second room, so that the fan module draws air from the first room, and the heat sink module exhaust air into the second room (see Fig. 13, the fan draws air 26 into the duct, and the heat sink exhausts it out of said duct).

6. With respect to claim 9, Marquis teaches wherein the heat conduction part (16) is connected to a central processing unit of the computer system (col 1, 56-58 states that the integrated circuit 12 is a central processing unit).

7. With respect to claim 10, Marquis teaches a case (30); a circuit (12) for controlling operation of the computer system; and a cooling module in the case comprising: a fan module (60) with an air inlet and an air outlet (a fan must inherently have an intake and outlet to create an airflow), capable of drawing air into the air inlet and exhausting air from the air outlet; a heat sink module (16) with an air inlet, and air outlet, and a heat conduction part (18); the heat conduction part being between the air inlet and the air outlet (see Fig. 13, clearly showing the air flowing into and out from the heatsink), the fan module stacked onto the heat sink module with the air inlet of the heat sink module connecting to the air outlet of the fan module (see Fig. 13), the heat conduction part stacked onto the circuit (12); the heat sink module allowing air to be

drawn into the air inlet and through the heat conduction part and exhausted from the air outlet; and an air wall (10) between the air inlet of the fan module and the air outlet of the heat sink module for isolating airflow from the air outlet of the heat sink module to the air inlet of the fan module (see Fig. 13), so that heated air from the air outlet of the heat sink module is prevented from flowing into the air inlet of the fan module.

8. With respect to claim 15, Marquis teaches wherein the air wall (10) divides the case into a first room and a second room, so that the fan module draws air from the first room, and the heat sink module exhaust air into the second room (see Fig. 13, the fan draws air 26 into the duct, and the heat sink exhausts it out of said duct).

9. With respect to claim 17, Marquis teaches wherein the circuit is a central processing unit of the computer system (col 1, 56-58 states that the integrated circuit 12 is a central processing unit).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Marquis et al. (PN 6,113,485) in view of Noble (PN 6,552,898). Marquis teaches the device as applied to claims 1 and 10, but lacks specific teaching of an approach connecting the air outlet of the fan module and the air inlet of the heat sink module.

Noble teaches an air wall (104) that comprises an approach (114); one end of the approach connecting to the air outlet of the fan module (col 5, 56-58) while another end connects to the air inlet of the heat sink module (110d, see Fig. 6B). It would have been obvious to one of ordinary skill in the art to combine the stacked configuration cooling system of Marquis with the duct mounted fan cooling system of Noble for the benefit of an inexpensive and modular cooling system.

12. Claims 4-6 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marquis et al. (PN 6,113,485) in view of Pei et al. (PN 6,169,656). With respect to claims 4 and 12, Marquis teaches the device as applied to claims 3 and 10 respectively, but lacks specific teaching of a brace being fixed to the air wall. Pei teaches a brace (4) in the case; the air wall (3) being fixed to the brace (see Fig. 4).

13. With respect to claims 5 and 13, Pei teaches a support device (52 supports the computer system) fixed to the brace.

14. With respect to claims 6 and 14, Pei teaches wherein the air wall comprises at least one connection end (11) while the brace comprises a corresponding connection end (42); the connection end of the air wall capable of plugging into the connection end of the brace (see Fig. 3, 4).

15. Claim 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marquis et al. (PN 6,113,485) in view of Kitlas et al (PN 5,852,547). Marquis teaches the device as applied to claim 7 and 15 above, but lacks specific teaching of a second fan module in the case for exhausting air from the second room. Kitlas teaches a second fan module in the case for exhausting air provided by the second room to

outside the case (see Fig. 10 teaching fans 90 or 110 exhausting air to the outside of the case). Kitlas is relied upon to teach the conventionality of using fans in a computer system case to exhaust air to the outside of the case. It would have been obvious to a person of ordinary skill in the art to combine the duct cooling system of Marquis with the case exhausting fans of Kitlas for the benefit of removing the heated air from the inside of the case increasing the cooling performance of the cooling system.

Response to Arguments

16. Applicant's arguments, see After-Final Amendment, filed 10/25/2005, with respect to the rejections of claims 1-17 under 35 U.S.C. § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of Marquis et al. (PN 6,113,485), Noble (PN 6,552,898), Pei et al. (PN 6,169,656), and Kitlas et al (PN 5,852,547).

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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